

Combining Like-Terms

Distributive Property

Distributing a Negative

Name _____

Date: _____ Per. _____

Part One: Combine Like Terms

1. $3x + x$

2. $4y + 5y$

3. $2m + 6m + 10$

4. $3a - 4b + 5a$

5. $-3n + 7 + 6n - 2$

6. $8t - 20 - 5t - 5$

7. $12c - 5c + 3c$

8. $15m - 5m + 5$

9. $12y + 3y^2 - 5y + 7y^2 - 2y$

10. $15m^3 + 5y^2 + 5m^2 - 2y^2 + 3m^3 + 14 + y^2 + 2m^2 + 20$

Part Two: Distributive Property and Combining Like Terms

11. $3(y + 2) + 6y$

12. $-8(z + 1) + 2(z + 4)$

13. $-6(t + 2) - 4t$

14. $-3(2x + 5) + 2(y + 3) + 5y$

15. $a(b + 2) + 3ab - 4a$

16. $-x(y + 4) + 3(2x - 7y) + 3xy$

Part Three: First, simplify the expression. Then evaluate when $x = 3$ and $y = 4$.

17. $3x + 2y + 6x$

18. $y + 2(y - 2)$

19. $-5(x + y) + 2x$

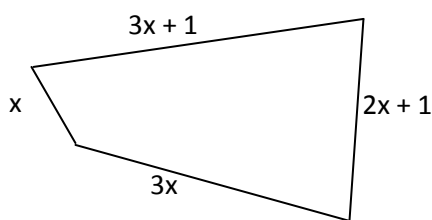
Part three continued...First, simplify the expression. Then evaluate when $x = 3$ and $y = 4$

20. $(3 + x)y + x^2$

21. $3(x + y) - 2(x + y)$

22. $x(y + 4) + 3(2x + 7y)$

23. Write an expression for the perimeter of the figure. Then solve if $x = 4$ cm



24. You and your family and your best friend and her family are planning a trip to an amusement park. There are two parents and three children in your friend's family, and there is one parent and two children in your family. The price of admission to the park is x dollars for adults and y dollars for youth.

a. Write an expression for the cost of admission for your family: _____

b. write an expression for the cost of admission for your friend's family: _____

c. write an expression for the total cost for both families combined:

d. If the price of admission increases from x to $a + 1$ for adults and from y to $b + 2$ for youths, **first write a new expression** for the **cost for both families combined**. Then, **simplify this expression**.
